

REMARKS

Claims 38, 40-59, 61-84, and 88-103 are pending in the above-identified application.

Claims 38, 40, 41, 51, 59, 61, 62, 72, and 83 are amended. Claims 39, 60, and 87 are canceled.

Claims 101, 102, and 103 are newly added.

The disclosure stands objected to because of an informality. That is, the patent number for the present application's parent application was not previously indicated on page 1. (See Office Action, page 8.) Although the parent application had not yet issued at the time of applicants' previous responses, the parent application now has issued, so the present application is amended appropriately on page 1. Accordingly, withdrawal of the objection to the specification is now requested.

In another matter, the Office Action indicates (also on page 8) that applicants have not filed certain foreign priority documents. Applicants respond by citing MPEP § 201.14(b), which provides:

Where the benefit of a foreign filing date based on a foreign application is claimed in a later filed application (i.e., continuation, continuation-in-part, division) or in a reissue application and a certified copy of the foreign application as filed, has been filed in a parent or related application, it is not necessary to file an additional certified copy in the later application. . .

(Page 200-90.) The parent application of the present continuation-in-part application is U.S. Patent Application 09/104,171. The patent has issued as U.S. Patent No. 6,332,752, and the face of the patent lists the foreign application priority data, which shows that the foreign priority documents were filed with the parent application. Therefore, under MPEP § 201.14(b), applicants are not required to file the priority documents with the present application.

Claims 51, 72, 83, and 84 stand rejected under 35 U.S.C. § 112, first and second paragraphs. The Examiner suggests inserting the text “of the casing” in specified places as a response to these rejections. (See the sentence bridging pages 2 and 3 of the Office Action.)

Applicants appreciate the suggestion. Instead of inserting “of the casing,” though, applicants insert “of the casing *portion*” instead, because the claims recite the term “casing portion” as the antecedent basis of the newly inserted text.

Accordingly, withdrawal of the rejections of claims 51, 72, 83, and 84 under 35 U.S.C. § 112, first and second paragraphs, is now requested.

Applicants appreciate the indication of allowable subject matter on page 16 of the Office Action. As an initial matter, applicants reference that indication that claims 39 and 60 would be allowable if rewritten in independent form.

When the Office Action issued, claim 39 depended from rejected claim 38, and claim 60 depended from rejected claim 59. In the present submission, instead of rewriting claims 39 and 60 in independent form, applicants cancel these claims but rewrite their parent claims 38 and 59, respectively, to include the subject matter recited earlier in claims 39 and 60. Essentially, applicants produce claims as discussed in the Office Action, albeit with different numbers.

Accordingly, claims 38 and 59 should now be allowed for at least the reason that claims 39 and 60 were deemed allowable in the Office Action. Also, because claims 40-58 and 61-79 each depend from one of claims 38 and 59, those claims should also be allowed.

Claim 83 stands rejected based on prior art. With the present submission, applicants amend claim 83 to recite subject matter that was recited in canceled claim 39. As discussed above, the Office Action had indicated that this subject matter recited with the subject matter of claim 38 had made claim 39 allowable. For analogous reasons, applicants submit that this claim

39 subject matter now recited in claim 83 makes that claim allowable, also. Accordingly, applicants now request the allowance of claim 83 and of claim 84 depending therefrom.

Rejected claim 87 is canceled, and claims 101-103 are added. Claim 87 had been rejected under 35 U.S.C. § 102(e) as being anticipated by *Okamura et al.* (U.S. Patent No. 6,924,841) and rejected under 35 U.S.C. 102(b) as being anticipated by Japanese Patent 2,557,551 (JP '551) and Japanese Patent 9-72,293 (JP '293). New claims 101-103 recite additional features of applicants' invention that this prior art does not teach. Applicants elaborate as follows:

Claim 101 describes a turbo-molecular pump that has *inter alia* a heating source directly attached to a lower end portion of said stator of said groove pumping section at a position lower than a lower end of said rotor of said groove pumping section. Claim 102 describes a turbo-molecular pump that has *inter alia* a heating source directly attached to a lower end surface of said stator of said groove pumping section. For written description support for these claim recitations, see for example Fig. 29 and page 38, lines 10-23, of applicants' disclosure.

In applicants' invention, as described in claims 101 and 102, because the heating source is directly attached to a lower end portion or a lower end surface of the stator of the groove pumping section, the heating source can directly heat the stator of the groove pumping section so as to achieve high efficiency of heat transfer. In contrast, the electric heater 14 of *Okamura et al.* or of JP '293 is not directly attached to the stator of the groove pumping section and this heats the stator of groove pumping section indirectly via good heat conductor 17. Accordingly, *Okamura et al.* or JP '293 cannot achieve high efficiency of heat transfer. Further, a nichrome wire 18 of JP '551 is not attached to a lower end portion or a lower end surface of the stator of the groove pumping section.

Applicants acknowledge the Examiner's duty to give claims their broadest reasonable interpretation (discussed on the Office Action, page 6). The issue here is whether it is reasonable to interpret a "heating source" as covering a combination of the prior art electric heater and the good heat conductor.

The good heat conductor itself is not a source of heat but instead an element that transfers heat from hotter body, the electric heater, to a colder body, e.g., a radiating plate. Applicants respectfully submit that, if it were a reasonable interpretation that a heat conductor is a "heating source" merely because it contacts a heating source, then one might think that any element contacting the heat conductor would also be a "heating source." Extending this reasoning, it would be a reasonable interpretation that a whole turbo-molecular pump was a "heating source" merely by containing an electric heater.

Applicants submit that such interpretation is *not* reasonable. The claims indicate by reciting "turbo-molecular pump" in the preamble and "heating source" in the body that the claims describe a turbo-molecular pump and that one of the elements of the pump is a heating source.

Unless the claim recitation of "heating source" is interpreted by a reasoning that any element contacting an electric heater through any number of intermediate elements is also a "heating source," none of the references relied on to justify the present invention teaches or suggests a "heating source" that is directly attached to a lower end portion or a lower end surface of said stator of said groove pumping section as claimed. Therefore, claims 101 and 102 are patentable over the prior art applied to reject canceled claim 87.

Accordingly, applicants now solicit the allowance of new claims 101 and 102.

New claim 103 describes a turbo-molecular pump that has *inter alia* the following:

a slide facilitating member for facilitating said stator to slide in a circumferential direction relative to said casing portion.

This subject matter was recited in canceled claim 39. As discussed above, the Office Action had indicated that this subject matter recited with the subject matter of claim 38 had made claim 39 allowable. For analogous reasons, applicants submit that this claim 39 subject matter now recited in claim 103 makes that claim allowable, also. Accordingly, applicants now request the allowance of claim 103.

As a final matter, applicants note that the form PTO-1449 of the September 25, 2002 Information Disclosure Statement (IDS) was attached to the December 27, 2002 Office Action with initials indicating review of the listed entries. However, perhaps inadvertently, one of the entries was not initialed, and the Office Action does not provide a reason for not indicating review. Applicants request that, with the PTO response to the present submission, the Examiner include a copy of the form PTO-1449 with all listed entries initialed to indicate Examiner review of the submitted prior art. (Alternatively, if the Examiner does not initial the listed entries, applicants request that the Examiner provide his reason.)

In view of the remarks above, applicants now submit that the application is in condition for allowance. Accordingly, a Notice of Allowability is hereby requested. If for any reason it is believed that this application is not now in condition for allowance, the Examiner is invited to contact applicants' undersigned attorney at the telephone number indicated below to arrange for disposition of this case.

In the event that this paper is not timely filed, applicants petition for an appropriate extension of time. The fees for such an extension, or any other fees which may be due, may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
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